

REMARKS

The Examiner cites a new prior art rejection against claims 29-39 – the claims are rejected under 35 U.S.C. §102(b) as anticipated by Shaw. Shaw teaches nothing of the invention, but teaches directly away.

Claim 29 recites a fiber core surrounded by a pump fiber. These elements are disclosed in Shaw as the fiber core 12 and the pump fiber 14. However, claim 29 goes on to recite a sheath surrounding the pump fiber. Shaw's preferred embodiment has no sheath. Shaw relies on a difference in index of refraction between the pump fiber jacket 14 and the surrounding air so that the pump rays 26 are completely reflected at the air/pump fiber jacket interface. This reflection occurs not only at the triangular portion of the pump fiber but also at the narrow cylindrical portion at 27. See column 3, lines 2-5 indicating that the jacket pump fiber is surrounded by a material such as air which has a refractive index lower than that of the jacket to cause the pump light to be guided within the jacket. See also column 5, lines 23-33 discussing the difference in refractive index between the air and the pump fiber jacket 14. It is also noted at lines 23-32 that although column 5 in the preferred embodiment the refractive index is air, a secondary cladding may surround the pump fiber 14 to reduce losses which may otherwise occur at the interface between the pump fiber 14 and the surrounding air due to surface irregularities and resulting scattering in the pump fiber 14.


Significantly, however, claim 29 goes on to recite that at least a portion of the sheath is removed at the last section. Of course, in Shaw his entire device is surrounded by air throughout its entire length so that none of the pump light escapes at the end 27. This is a teaching directly away from the present invention. If a surrounding cladding were provided instead of air in Shaw, according to Shaw's

teachings none of the surrounding cladding would be removed even in the region 27, since Shaw specifically teaches that his fiber core 12 primarily absorbs the pump light at the region 27. To the contrary, in the invention it is desired that the pump light not be reflected near the end of the fiber core and should leave the pump fiber at this end where laser radiation occurs. Thus, Shaw is diametrically opposed to the invention and teaches directly away.

Dependent claims 30-35 distinguish at least for the reasons claim 29 distinguishes. Also independent claim 36 distinguishes in the same manner claim 29 distinguishes. Also dependent claims 37 and 39 are allowable for the same reasons claim 36 is allowable.

Allowance of the case is respectfully requested.

Respectfully submitted,



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